SANTA CRUZ BIOTECHNOLOGY, INC.

CD47 (CC2C6): sc-21786

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CD47 is an integral membrane protein that plays a role in the regulation of cation fluxes across cell membranes. Specifically, CD47 is involved in the increase in intracellular calcium concentration that occurs upon cell adhesion to the extracellular matrix. It is also a receptor for the C-terminal cell binding domain of thrombospondin (SIRP). CD47 is absent from Rh-null erythrocytes, but does play a role in cell adhesion in non-erythroid cells and may prevent premature elimination of erythrocytes. It may also be involved in membrane permeability changes following viral infection. CD47 is expressed on hemopoietic cells, epithelial cells, endothelial cells and fibroblasts and is strongly expressed in brain and mesenchymal cells.

REFERENCES

1. Boerman, O., et al. 1989. Monoclonal antibodies against ovarian carcinoma-associated antigens, raised by immunization with cyst fluids. Anticancer Res. 9: 551-558.
2. Knapp, W., et al., eds. 1989. Leukocyte Typing IV: white cell differentiation antigens. New York: Oxford University Press.
3. Van Niekerk, C.C., et al. 1993. Changes in expression of differentiation markers between normal ovarian cells and derived tumors. Am. J. Pathol. 142: 157-177.
4. Slobbe, R., et al. 1994. Analysis of idiotope structure of ovarian cancer antibodies: recognition of the same epitope by two monoclonal antibodies differing mainly in their heavy chain variable sequences. Clin. Exp. Immunol. 98: 95-103.
5. Mawby, W.J., et al. 1994. Isolation and characterization of CD47 glycoprotein: a multispanning membrane protein which is the same as integrin-associated protein (IAP) and the ovarian tumour marker OA3. Biochem. J. 304: 525-530.

CHROMOSOMAL LOCATION

Genetic locus: CD47 (human) mapping to 3q13.12.

SOURCE

CD47 (CC2C6) is a mouse monoclonal antibody raised against CCRF-CEM T-lymphoblastic cell line of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD47 (CC2C6) is available conjugated to either phycoerythrin (sc-21786 PE) or fluorescein (sc-21786 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

CD47 (CC2C6) is recommended for detection of CD47 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for CD47 siRNA (h): sc-35006, CD47 shRNA Plasmid (h): sc-35006-SH and CD47 shRNA (h) Lentiviral Particles: sc-35006-V.

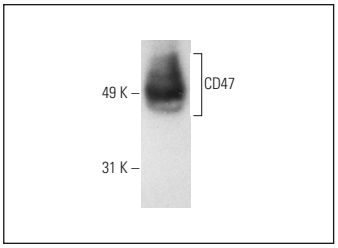
Molecular Weight of CD47: 47-60 kDa.

Positive Controls: HISM cell lysate: sc-2229, HeLa whole cell lysate: sc-2200 or ECV304 cell lysate: sc-2269.

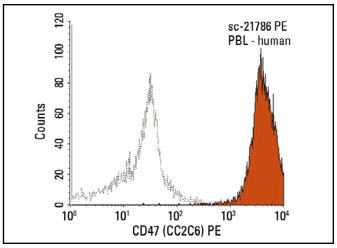
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



CD47 (CC2C6): sc-21786. Western blot analysis of CD47 expression in NIH:OVCAR-3 whole cell lysate.



CD47 (CC2C6) PE: sc-21786 PE. FCM analysis of human peripheral blood leukocytes. Black line histogram represents the isotype control, normal mouse IgG_1-PE: sc-2866.

SELECT PRODUCT CITATIONS

1. Cilli, D., et al. 2014. Identification of the interactors of human Nibrin (NBN) and of its 26 kDa and 70 kDa fragments arising from the NBN 657del5 founder mutation. PLoS ONE 9: e11465.
2. He, Y., et al. 2020. CD47 is a negative regulator of intestinal epithelial cell self-renewal following DSS-induced experimental colitis. Sci. Rep. 10: 10180.
3. Qu, S., et al. 2022. Human lung adenocarcinoma CD47 is upregulated by interferon-γ and promotes tumor metastasis. Mol. Ther. Oncolytics 25: 276-287.

CONJUGATES

See **CD47 (B6H12): sc-12730** for CD47 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.